

First Extended Temperature Range solid state battery technology designed for Industrial IoT and Automotive

Ilika offers a wider range of operating temperatures for Stereax™ battery technology

LONDON, UK – 26 April 2017: Ilika plc [LON: IKA], a pioneer in materials innovation and solid state battery technology today announces the launch of Stereax P180, extending the operating temperature range of the Stereax family of solid state batteries. The Stereax P180 brings all the benefits of the Stereax products including miniaturisation and energy density with the additional benefits of support for extended temperature ranges required for many Industrial IoT and Automotive end applications. Enabling always on, self-charging energy efficient IoT solutions for more demanding environments.

As the trend towards digitising industrial processes gathers momentum, there is a growing requirement for components with enhanced tolerance to temperature, moisture and vibration.

“For industries like ours gathering more manufacturing and in-service maintenance information on our products enables us to improve operational efficiency as it enables full life cycle traceability and visibility from manufacture through to disposal” said Keith Jackson, CTO Meggitt PLC. “Miniature, ultra-low maintenance batteries are an essential building block to the required increased instrumentation of the build and maintenance processes, both for new and retro fit capabilities”.

Solid state batteries offer more stable, energy-efficient, reliable battery technology that can be used in conjunction with all current energy harvesting technologies. They enable self-sustaining power sources that do not need to be changed regularly or use additional expensive cabling. Offering significant weight saving in automotive environments and efficient, reliable functionality over a wide range of temperatures. Relative to standard lithium ion batteries, Stereax P180 solid state batteries have lower leakage currents (10x smaller) and longer life spans, up to 10 years (5x longer). They can also be integrated with other electronic components enabling the product to be kept as small as possible. In the Stereax P180 all of these aspects are now combined with the ability to support temperatures range from -40°C up to +150°C.

“The Stereax product family brings a range of solid state battery solutions which customers can license to enable battery technology that meets the demanding needs of Industrial IoT and automotive environments, said **Graeme Purdy, CEO, Ilika**. “Ilika continues its commitment to bringing market leading solutions to address the wide needs of battery technology in the connected world.”

accelerated materials innovation

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To learn more about the capabilities of Stereax Solid State batteries Ilika will be demonstrating the capability of both the Stereax P180 and Stereax M250 products in perpetual beacons at:

- ▲ IDTechEx Europe, Berlin (Booth C10; 10-11 May 2017 and oral presentation on 10 May at 12:40)
- ▲ Nanotech, Washington, DC (oral presentation "*Enabling Autonomous Sensing Devices for IoT with Thin Film Batteries*" on 15th May at 15:10)
- ▲ Battery Power, Addison, TX (17 May at 10:20)
- ▲ and Sensors Expo and Conference, San Jose, CA (Booth 1431; 27-29 June 2017)

About Ilika

Ilika plc (LON: IKA) is a pioneer in materials innovation and solid state battery technology. The company has been inventing new materials for energy and electronics markets for over a decade, including in automotive, aeronautical and electronic components sectors.

By applying that heritage of patented materials invention, the company has developed ground-breaking solid state batteries to meet the specific demands of a wide range of applications in the Internet of Things (IoT). Ilika is now licensing its battery technology IP to partners for IoT sensors for the Smart Home/Building; Medical; Automotive and Transportation sectors around the world.

Ilika's Stereax battery technology IP family offers compelling advantages over conventional lithium ion batteries, including: smaller footprint giving greater energy density, non-toxic properties, faster charging, increased cycle life, low leakage and reduced flammability.

Ilika is working to help build the connected world, removing the constraints of energy source for designers and engineers by delivering 'fit once and forget' power wherever it is needed.

The company is headquartered in the UK and has operations in Germany, US and Japan. Find more information at www.ilika.com

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Appendix: Links to Ilika's battery technology-related visuals on Ilika's web site

Infographic – Stereax P180 technology for Industry IoT and Automotive

www.ilika.com/images/uploads/general/STEREAX_P180_INFOGRAPHIC_V2.0.pdf

Ilika Stereax P180 visual in perpetual beacon demonstrator:

[www.ilika.com/images/uploads/general/PERPETUAL BEACON FOR INDUSTRY 4 POWER BY ILIKA STEREAX P180 V2.0.pdf](http://www.ilika.com/images/uploads/general/PERPETUAL_BEACON_FOR_INDUSTRY_4_POWER_BY_ILIKA_STEREAX_P180_V2.0.pdf)

Battery construction diagram:

www.ilika.com/images/uploads/general/STEREAX-P180-EXPANDED-CONSTRUCTION-ILLUSTRATION-V2.0.pdf

Stereax P180 launch video:

<https://youtu.be/xethWSAPZAQ>